

Topic	Order	Question	Answer
1 EPA's Preferred Cleanup Option	1	<i>Would the new redevelopment alternative protect people and the environment?</i>	Yes. EPA can only select from among cleanup alternatives that are protective.
1 EPA's Preferred Cleanup Option	2	<i>The consolidation and capping alternatives in the Allied Landfill Feasibility Study do not include a bottom liner. Is it legal for a Toxic Substances Control Act landfill to not have a bottom liner? Is a landfill without a bottom liner safe?</i>	Neither TSCA – the federal law that regulates PCBs and other toxic substances – nor its implementing regulations require landfills to have a bottom liner. The purpose of a bottom liner is to prevent waste from leaching into and contaminating the groundwater beneath a landfill. PCBs bond tightly to landfill materials and groundwater does not easily flow through, so it is unlikely the waste will contaminate the groundwater. The consolidation, capping and monitoring cleanup method calls for a multi-layer engineered cap over the waste to prevent rain water from flowing through. As a result, a bottom liner is not necessary.
1 EPA's Preferred Cleanup Option	3	<i>Would stacking the waste higher cause contaminated water to be squeezed out, sending contamination into the groundwater?</i>	Piling excavated material onto existing material would compress the underlying materials. During the design phase, we would take samples to determine if we need to add stabilization measures. We would also monitor the groundwater to see if we need to treat the groundwater. In the long term, compression of the materials could make them less porous.
1 EPA's Preferred Cleanup Option	4	<i>What will be the cleanup standards?</i>	EPA develops cleanup standards based on how the site may be used after cleanup and how people and animals might be exposed to remaining contamination. We will finalize the cleanup standards after we select a final cleanup plan. To learn more, see a discussion of potential cleanup standards in the Allied Landfill Feasibility Study at www.epa.gov/region5/cleanup/alliedpaper/index.html
1 EPA's Preferred Cleanup Option	5		

Revised/New Question	Revised/New Answer
Would EPA's preferred cleanup option protect people and the environment?	Yes. EPA can only chose an option that is protective
The consolidation and capping alternatives do not include a bottom liner. Is a landfill safe without a bottom liner?	Adding a liner would not provide additional protectiveness. Liners are used to prevent waste from contaminating groundwater and given the conditions at the landfill, it would not be necessary. Since PCBs at the Allied Landfill are bound tightly to the landfill materials, groundwater does not easily flow through, and this is evident in the data that has been collected at the site. In addition, EPA will be adding a multi-layer engineered cap over the waste to prevent rain water from flowing through, adding additional protection.
SAME	Piling excavated material onto existing material, causing compression would make contamination migration more difficult in the long-term since materials would have even less pore space. However, during the design phase, we would take samples to better understand what types of engineering steps would have to be taken to make sure the remedy is stable. We would also monitor the groundwater to see if we need to do any treatment.
What are the cleanup standards?	
What is the timeline for cleanup?	

2 Protectiveness and Groundwater	1	<i>How has EPA cleaned up places similar to Allied Landfill?</i>	We have used consolidation, capping and monitoring as a cleanup method at King Highway Landfill, 12th Street Landfill and the Willow Boulevard/A- Site Landfill. Each of these sites are PCB-contaminated paper-waste landfills that are part of the larger Kalamazoo River site. Since cleanup was done at King Highway Landfill, groundwater monitoring has found PCBs 34 times in 595 samples since January 2003. At 12th Street Landfill, groundwater monitoring has found PCBs 13 times in 224 samples since October 2011. In all these instances, the PCBs detected were at low levels that do not pose a risk to people. We expect Willow Boulevard/A-Site Landfill to have similar results once monitoring is complete. We have used the consolidation, capping and monitoring cleanup method at dozens of landfills in the Midwest.
2 Protectiveness and Groundwater	2	<i>Does the contamination at Allied Landfill affect Kalamazoo drinking water wells?</i>	No. EPA studied the groundwater and the flow patterns and found that the groundwater is not flowing toward the city well fields. Also, we have not detected PCBs in the groundwater at levels that pose a risk to human health.
2 Protectiveness and Groundwater	3	How do you know the site is safe?	Because monitoring over the past # years has shown that the PCBs have not moved at all. We're confident that they won't in the future. Groundwater monitoring in 2002-2003 and in 2014 show that PCBs are contamination is not leaving the site via groundwater at levels that pose a risk . This is backed up by our soil data that show PCB contamination to be frozen in place. These multiple lines of evidence tell us that the PCB contamination is locked to the residuals at Allied Landfill. The risk posed is by erosion. The greatest chance of exposure is for contaminated waste to erode from the landfill and then get back into Portage Creek and the Kalamazoo River system.
2 Protectiveness and Groundwater	4		
2 Protectiveness and Groundwater	5	So, you say the site is protective of groundwater. But how will it be protective of public uses?	The remedy will be consolidation and capping of contaminated material that poses a risk. So, excavated areas will be safe to use as there will not be contamination there that poses a risk. At capped areas, the contamination will be below a cap and any recreation will be on clean material. There will not be a risk of contact between people/animals and the contamination. Groundwater data tells us that groundwater does not carry contamination off-site. Monitoring of the cap and groundwater will let us know that these protective conditions (after remedy implementation) continue to be safe. Because monitoring over the past # years has shown that the PCBs have not moved at all. We're confident that they won't in the future.
2 Protectiveness and Groundwater	6	<i>Will groundwater be prevented from contacting the bottom of the landfill so there will be no treatment costs?</i>	We don't expect groundwater treatment will be needed because of the paper waste that makes up most of what's in the landfill. That material is roughly as porous as clay, so the groundwater doesn't flow through it easily. In addition, PCBs tend to bond with organic material, like the paper waste in the landfill, so they don't readily dissolve in water. We rarely find PCBs in groundwater at Allied Landfill. When we do, they are at low levels that
3 EPA Decision Making	1	<i>Are there any alternative technologies that could be used?</i>	We looked closely at a number of alternative technologies and concluded that none are viable options at Allied Landfill. To learn more, see Section 3 of the Allied Landfill Feasibility Study and a supplemental memorandum, both of which are at www.epa.gov/region5/cleanup/alliedpaper/index.html .
3 EPA Decision Making	2	<i>Would the addition of a new redevelopment alternative mean that the total removal alternative would be taken out of the Feasibility Study?</i>	No. We will keep the total removal alternative in the Feasibility Study, as well as the other options, and consider each before choosing a cleanup option.

Has EPA cleaned up places like the Allied Landfill using capping, consolidation and monitoring?	EPA has used this technology locally at the King Highway Landfill, 12th Street Landfill and the Willow Boulevard/A-Site Landfill. In all these instances, the PCBs detected were at low levels that do not pose a risk to people. We expect Willow Boulevard/A-Site Landfill to have similar results once monitoring is complete (IS THIS DONE?). We have used the consolidation, capping and monitoring cleanup method at dozens of landfills in the Midwest.
SAME	No. EPA studied the groundwater and the flow patterns and found that the groundwater is not flowing toward the city well fields. Also, we have not detected PCBs in the groundwater outside of the site boundary at levels that pose a risk to human health. Once cleanup takes place, we will continue to monitor the groundwater to make sure there is no contamination moving off-site.
When was the last time wells were sampled? What were the results?	Groundwater monitoring was conducted in 2003 and in 2014. Results show that PCBs are not leaving the site through groundwater. Because monitoring has shown that the PCBs have not moved, its likely that they will not move in the future.
How do you know the contamination won't move off site ?	In addition to the groundwater data, soil data shows that PCB contamination is not mobile. The current risk of PCBs moving off-site is from erosion from Portage Creek. EPA's preferred alternative will eliminate this risk by consolidating the PCB materials further away from the creek and capping it under an engineered cap. Monitoring of the site will be conducted at a periodic basis to make sure the remedy remains protective.
How will you make sure the site is safe for public use?	Excavated areas will be safe to use since the contamination would be removed. At the capped areas, the contamination will be below an engineered cap and any recreation taking place on top will be on clean material. There will be no risk of contact between people and animals. Monitoring of the cap will let us know that the area continues to remain safe.
How will you prevent groundwater from caring PCBs off site?	The physical characteristics of the landfill material is very dense and clay-like making it difficult for water to flow through it. PCBs are also hydrophobic - or don't like to dissolve in water. Given the nature of the material, we rarely find PCBs in groundwater at Allied Landfill. When we do, they are at low levels that do not pose a risk to people. Therefore, there is little evidence to support PCBs migrating off-site through groundwater.
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3 EPA Decision Making	3	So why not chose total removal?	<p>a. PCBs are very dangerous. Wherever they go, as a part of remediation, will require long-term monitoring and secure storage. Whether they remain at a Superfund site or are removed, they will be monitored and maintained. Total removal provides no added protection for that necessity. – EPA can't really say that. NCP does not let us consider the off-site management of waste issues in remedy selection. EPA considers the balance of short-term and long term risks when comparing the risk of implementation and the residual risks of remedies. Total removal has very high risk of implementation. Health and safety risks are high because truck traffic and amount of earth moving on site. There is a higher risk of off-site contamination of Portage Creek because of all the excavation. Higher risk of stuff spilling from a truck during transportation too.</p> <p>When weighing all the factors, you gained no additional protection for total removal verses the capping and consolidation option. While there are some risks associated with any remediation option, total removal would have higher short-term risks like increased truck traffic (e.g. 115,000 trucks every day (every 4 mins/5 days/week for 5 years), increased chance of recontamination of Portage Creek etc. and significant cost that caused it not to be feasible.</p>
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Why was removal and off-site disposal not chosen? Was it because of cost?	<p>A number of factors were why removal and off-site disposal was not chosen, When EPA weighed all the cleanup options, there was no additional protection gained from removal verses capping and consolidation. There were several short-term impacts, including truck traffic, movement and management of a large amount of contaminated material, and time to reach protectiveness that EPA considered in addition to high cost (<i>see TABLE PAGE??</i>). Ultimately, EPA's preferred option offered the best balance while providing protection to human health and the environment.</p>
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4 Cost of Cleanup	1	Didn't you choose this because it's the lowest cost?	<p>No; cost is not the deciding factor in choosing a remedy. Spending more money does not give you more protection. ALL of these options that are considered have to be protective – period.</p> <p>While families, cities, etc. make decisions based on the budget, this does not drive our decision making. We compare several factors when determine cleanup (protection/cost – do you reach protectiveness via the long term, the short-term, do you get more protection for more money – NO)– cost-effectiveness, or how well we can maximize balance what we need to achieve under the law per dollar that will need to be spent. the ability to achieve all of the factors we need to look at under the law for a the law requires that that ANY proposed remedy be protective. All these remedies meet that requirement. When we compete remedies, balance the long-term protection the status of available funding does not influence selection of remedy. When EPA looks at the cost of a remedy during the process of comparing remedies, EPA considers cost-effectiveness. They do so with different mechanisms. When EPA looks at the cost of a remedy during the process of comparing remedies, EPA considers cost-effectiveness. That is comparing short-term risks, long-term effectiveness and permanence and then implementability compared to cost. How much does it cost to achieve what level of protectiveness. It is like looking at the cost per square foot of a house. EPA tries to buy the best balance of the above criteria.</p>
4 Cost of Cleanup	2	Does spending more money give you more protection?	Total removal – is not more protective than any other remedy – this is supported by the soil and ground water data.
4 Cost of Cleanup	3	<i>What are the costs associated with a remedy that keeps the waste in place?</i>	Leaving waste in place requires long-term maintenance to ensure the cleanup continues to protect people and the environment over time. For Allied Landfill, EPA estimates ongoing maintenance of consolidation, capping and long- term monitoring would be \$5 million.
4 Cost of Cleanup	4	<i>Could the cost of a remedy at Allied Landfill affect available funds for the river?</i>	If the landfill cleanup costs more than the amount set aside for it in the trust, EPA might draw on site-wide funds that would otherwise be used to clean up the Kalamazoo River.
4 Cost of Cleanup	5	If there were more money in the trust fund would you spend on this site?	We will spend the money that is required to secure the site. It's great to have a trust fund; but other sites with no trust fund get remediated. And remediation means, secured and protective per statute (law). EPA selects remedies independent of available funds. This is true for all kinds of sites, ones with responsible parties, orphan sites, ones with trust funds and ones relying upon the government to pay for the cleanup. This about EPA being consistent in remedy selection no matter the financials. So, the amount of money in the trust fund does not dictate the remedy selected.

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If there was more money available, would you chose a more expensive remedy?	<p>No. EPA cannot chose a remedy unless it is protective and we do not select remedies based on how much money is available. Cost must be considered when selecting a cleanup plan, but so must:</p> <ul style="list-style-type: none">-long-term effectiveness and permanence;- reduction of toxicity, mobility or volume through treatment;- short-term effectiveness; and- implementability <p>In this case, we found the best balance of these factors with EPA's preferred cleanup option.</p>
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5 Future Use and Public Involvement	1	<i>Who will make sure that the landfill cleanup protects us long-term?</i>	It is EPA's responsibility to make sure the cleanup protects people and the environment. If the cleanup includes waste managed on-site, there would be regular monitoring of the landfill cap and groundwater. If there is a site-wide redevelopment, we will take steps to ensure that the cleanup stays effective in perpetuity.
5 Future Use and Public Involvement	2	Who will own the site?	COME UP WITH A GOOD ANSWER! If the answer is "it depends," then lay out some real scenarios. It would be nice if the city could step up and say that they intend to do something. Its not resolved yet, but don't believe its an obtical of achieving protection at the site. (CITY LETTER?)
5 Future Use and Public Involvement	3	How will the public be involved?	<p>We are going above and beyond the requirements for public participation. We will hold any discussion with community groups as asked. I would rather not say that we are going above and beyond. That is for others to decide, not EPA. Public discourse and feedback from stakeholder groups has helped EPA to improve its public communication. The public can be further involved by participating in future availability/discussion sessions. Others in your community may share your questions and concerns, so by discussing them with EPA in one of these public venues, you help to inform your community. As we begin to build a cleanup work plan – we will continue to work with local partners and community members so their input and feedback is reflected in our planning.</p> <p>On-going partnership with the community are part of plan for monitoring. We are never going to not monitor this site. Part of the monitoring includes regular communication with the community. In the future, continue to participate. EPA will share monitoring data with the community and invite the community to future site tours etc. as remedies are build and operational. observe Operation and Maintenance activities. Participate and then report back to your neighbors.</p>

SAME	It is EPA’s responsibility to make sure the cleanup protects people and the environment. Since the cleanup includes waste managed on-site, there would be regular monitoring of the landfill cap and groundwater. Monitoring results will be shared with the community and if any issues are found, EPA will take action to fix it.
Who will own the site in the future?	Ownership of the site in the future is uncertain, however future ownership will not prevent EPA from achieving protection at the site.
How will the public be involved in decision making in future?	EPA is committed to building communication and relationships with the community. Public discourse and feedback from stakeholder groups has helped EPA to improve its public communication and improve its cleanup plans. As we begin to build a cleanup work plan, we will continue to work with local partners and community members so there input and feedback is reflected in our planning.